

Aero Design Ltd.

Work Order Control Sheet

Work Order#: 2016-118 Date Opened: 30 August 2016 Title: Fabrication

Aircraft OEM: Eurocopter Aircraft Model: AS350 Product Type: Bicycle Rack Product Model: Beam/Bracket/Strap Quantity: 36/14/66
108

Work Order Contents

Work Order/Build Sheets (Procedures Provided)
Additional Work Sheets (Standard Practice)
Drawings (See List Below)
Parts Distribution Sheet
Sub Component Tags
Completed Certification
Time Sheet (R&D)
Notes

Initial or N/A

JC
N/A
JC
JC
N/A
JC.
N/A
N/A

Component Completion

Quantity Complete on This Work Order
Quantity Incomplete on This Work Order
Further Processing Required Before Release
Release to Stock as Components

As Instructed

36/14/108
0
N/A
N/A

Build Sheet Contents

Tasks Initialled
Dual Inspections Initialled

Initial or N/A

JC
N/A

Certification

Form One Completed
Serviceable (Green) Tag Completed
In Process (Yellow) Tag Completed
Unserviceable (Red) Tag Completed
Parts Placed in Stores for Distribution

Initial or N/A

N/A
JC.
JC.
N/A
JC.

Drawing List

Drawing #	Rev #	Description	Initial or N/A
100230	0	Beam	JC
100225	0	Strap	JC

Additional Documentation

Documentation of a minor change
Non-Conformance Report Required
Service Difficulty Report Required

Initial or N/A

N/A
N/A
N/A

Billing

Local (Aero Design)
Research and Development
Third Party

Initial or N/A

JC
N/A
N/A

Traveller

Initial or N/A

Notes:

100230-01 BEAM
100230-02 BRACKET
100225-01 STRAP

Work performed by:

ICC / Dual Inspection performed by:

Work Order closed by:

Print: J. CLARKE

Print: MA

Print: J. CLARKE

Sign: JH Clarke

Sign: JH Clarke

Sign: JH Clarke

SCA: AD02

SCA: AD02

SCA: AD02

Date: 9 SEPT 2016

Date: 25 MAY 2018

Date: 25 MAY 2018

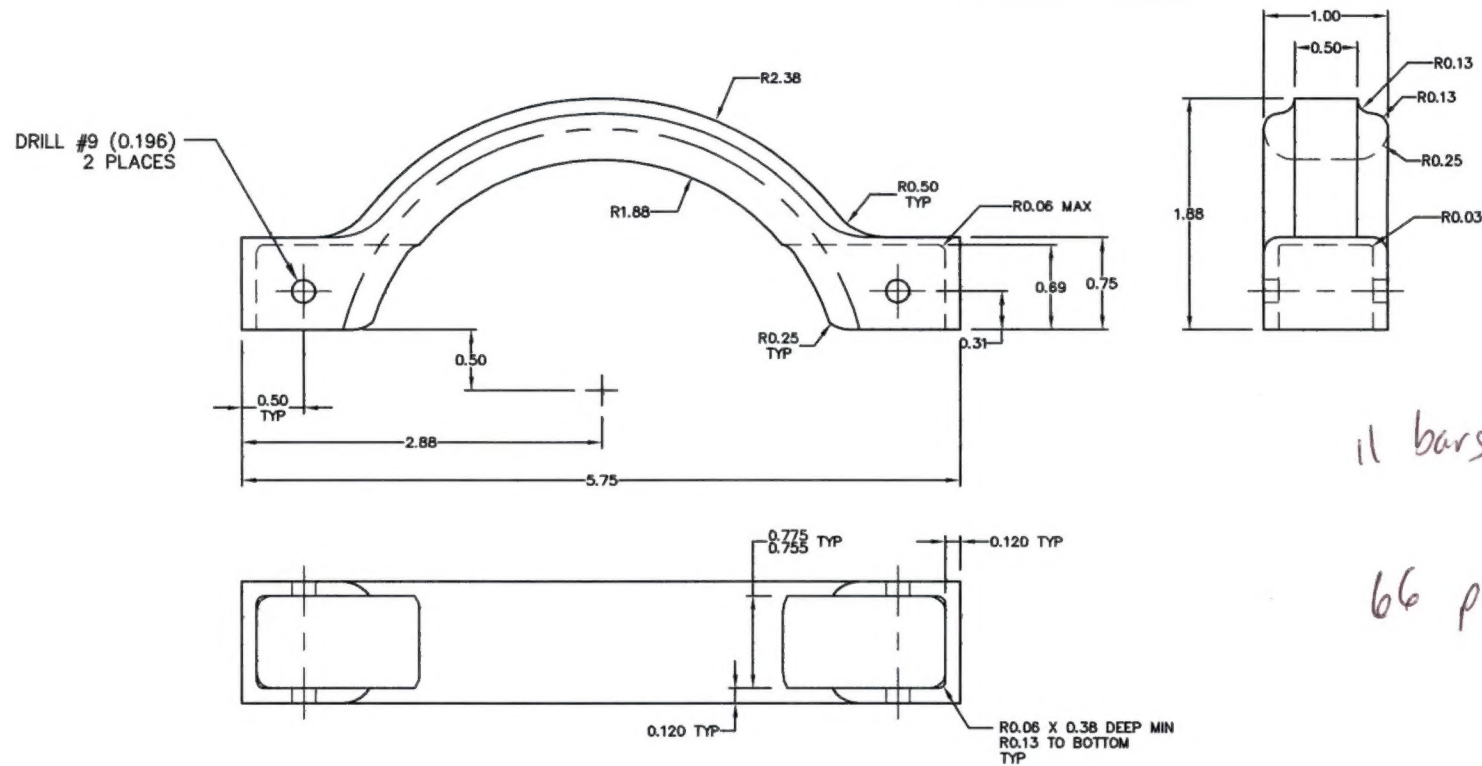
Approved Manufacturing Facility 73-04

Form 20.D.03

Rev. Original 23 Sep 2014

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REV.	DESCRIPTION OF CHANGE	INITIALS	DATE
0	INITIAL ISSUE		



① STRAP

NOTES

1. REMOVE ALL BURRS AND BREAK SHARP EDGES.
2. FINISH - ALUMINUM PARTS:
THOROUGHLY DEGREASE, ALCOHOL, EPOXY PRIME AND POLYURETHANE PAINT.
ALTERNATE: ANODIZE IN ACCORDANCE WITH MIL-A-8625F, TYPE II.
ALTERNATE, POWDER COATING:
- THOROUGHLY DEGREASE USING TOP CHEMICALS TOP COAT 8888 DEGREASER / IRON PHOSPHATE @ 3% BY VOLUME.
- POWDER COAT USING SHERWIN WILLIAMS POLYESTER SUPER DUTY POWDER OR EQUIVALENT POWDER COAT MATERIAL AND PROCESS THAT DOES NOT EXCEED TEMPERATURE/TIME LIMITS NOTED BELOW.
- CURE POWDER COATING AT 392°F (±10°F) FOR 20 MINUTES (±3 MIN).

100225-01	01	STRAP	6061-T6 ALUMINUM	QQ-A-200/B	2 X 1 BAR
PART NO.	ITEM	DESCRIPTION	MATERIAL	MATERIAL SPEC	STOCK SIZE
QTY	LIST OF MATERIALS				
		APPROVALS	DATE	 AERO DESIGN LTD. 9888A MALASPINA ROAD POWELL RIVER, BC, CANADA, V8A 0G3 TEL: 604.483.2376 www.aerodesign.ca	
		DRAWN: JEFF CLARKE	13 JUNE 2016		
		CHECKED: JASON REKVE	13 JUNE 2016		
		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ON: DECIMALS ANGLES X.XXX ±0.010 ±1/2° X.XX ±0.03 X.X ±0.1		AIRBUS HELICOPTERS AS350/AS355/EC130 BICYCLE RACK INSTALLATION STRAP FABRICATION	
		SCALE 1 : 1	DWG. SIZE	DWG. NO.	REV.
SHEET 1 OF 1		A3	100225	0	



Aero Design Ltd.

9888 A Malaspina Rd. Powell River, BC, V8A 0G3

Phone: 604-483-2376 Fax: 604-483-2372 E-mail: info@aerodesign.ca

AMF 73-04

Nomenclature: Beam

No. of pieces: HDB 12

Manufacturer: Aero Design Ltd

Part No.: 100230-01

Serial No.: 16058

TTSN: N/A

TSO: N/A

Rem.: N/A

Work Order No.: 2016-118

Remaining Tasks to be Performed: Complete

Signature: [Signature]

Date: Sept 9th / 2016

Lic. No. / SCA AD-07

Serviceable



Aero Design Ltd.

9888 A Malaspina Rd. Powell River, BC, V8A 0G3

Phone: 604-483-2376 Fax: 604-483-2372 E-mail: info@aerodesign.ca

AMF 73-04

Serviceable

Remarks

Aero Design Ltd.

Component Fabrication

Work Order Number: 2016-118

100215-01 Bicycle Rack Base

Date: _____

Notes:

Drilling speed to 320 RPM.

Rapid Tap cutting fluid or equivalent coolant required

Rail

Tasks	SCA
1. Record material PO below	
2. Cut 78230 step extrusion to 82.75" in length	
On each end, cut the side and bottom walls shorter by 1/8" leaving the tread rail full length IAW drawing 100215 Detail B	
3. Deburr one end on buffing wheel	
4. On the bottom wall, place a mark 7/8" from each end and drill 3/8" hole which will act as a drain and allow ventilation during the welding process	

Manual Mill

5. While supporting the long end of the rail, clamp aft end (dependant on LH or RH) into the manual mill vice	
6. Using standard practices, zero off of the end and back of the part and set zero on the X and Y axis on the digital display	
7. Set table to drill locations IAW drawing 100215 Detail C and bore .75" holes	
8. Deburr edges and holes	

Welding

9. Wipe parts with Acetone or equivalent solvent	
10. Place 100226-01 bushings in .75" holes and locate them IAW drawing 100215 Detail C	
11. Weld IAW drawing 100215	
12. Place cap 82720-04 on each end and weld IAW drawing 100215 Detail B	

Beam

13. Cut 1" x 8" 6061-T6 extruded bar to 24 7/8" in length.	DB
14. Install material in CNC mill ensuring RH edge overhangs for tool clearance	JC
15. Set material stop to ensure subsequent steps and parts return to the same location	JC.
16. Load and run program 021 and 022	JC.
17. Rotate part 180 degrees on plane	JC.
18. Load and run program 021 and 022	JC.
19. Separate parts by cutting along mark scribed during machining process	DB

20.	Install 100230 jig plate into CNC straddling vices and lock down	gc
21.	Using a soft face hammer, tap the jig down to ensure it is seated	gc
22.	Zero table using standard practices	gc
23.	Mount separated part on jig using 1/4" bolts	gc
24.	Load and run program 023	gc
25.	Using vertical band saw, remove tooling lug at the outboard end	DB
26.	On manual mill, zero off the end of the part using standard machining practices	DB
27.	Using standard practices, machine surface area from which lug was removed	DB
28.	Inspect finish and dimensions of final part.	gc

Rack Base Assembly

29.	Insert Helicoils in threaded bushings IAW drawing 100226	
30.	Install bike rack base beams into jig fixture	
31.	Install rails into beams	
32.	Weld IAW drawing 100215	
33.	Inspect finish and dimensions of final part.	
34.	Tag completed parts IAW Aero Design MPM.	

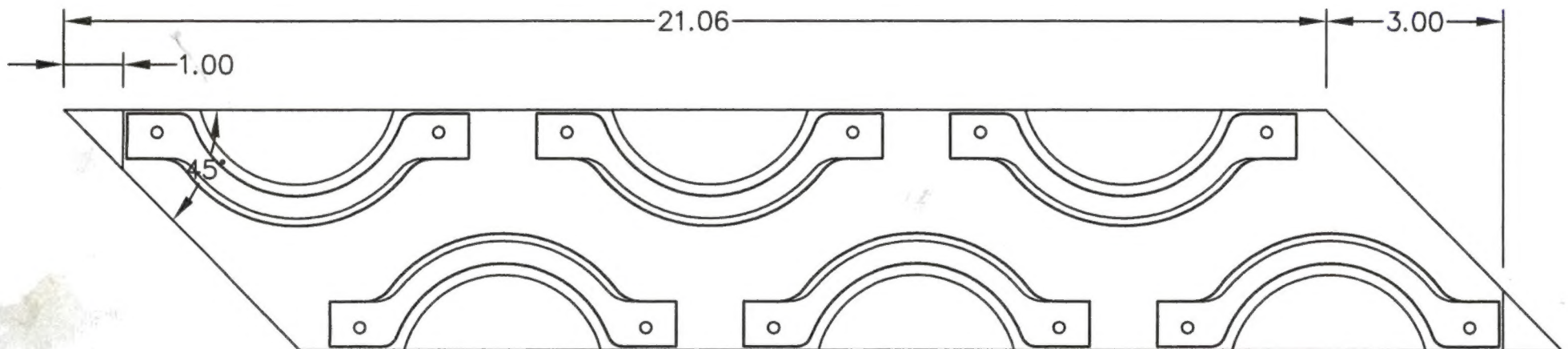
Material Purchase Order Number 10058

Batch Quantity 36 BEAMS 100230-01

14 BRACKET 100230-02

66 STRAP 100225-01

16003
16054



Aero Design

Parts Distribution Sheet

Description: Bike Rack

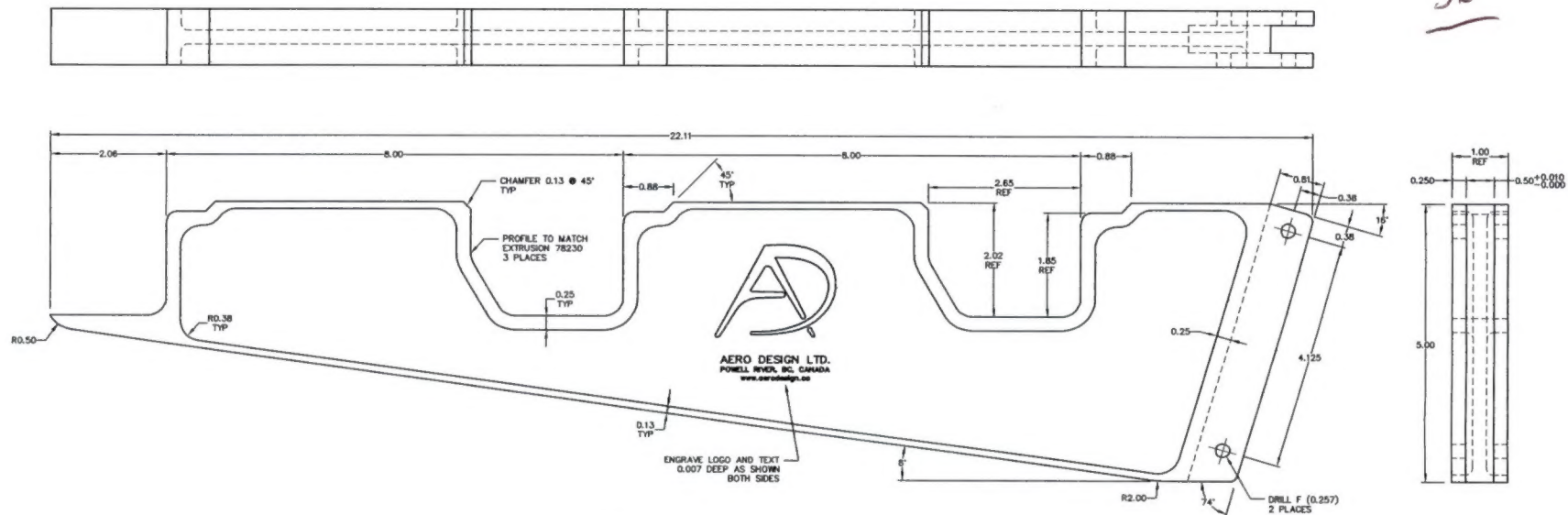
WO# 2016-118

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WO# 2016-118

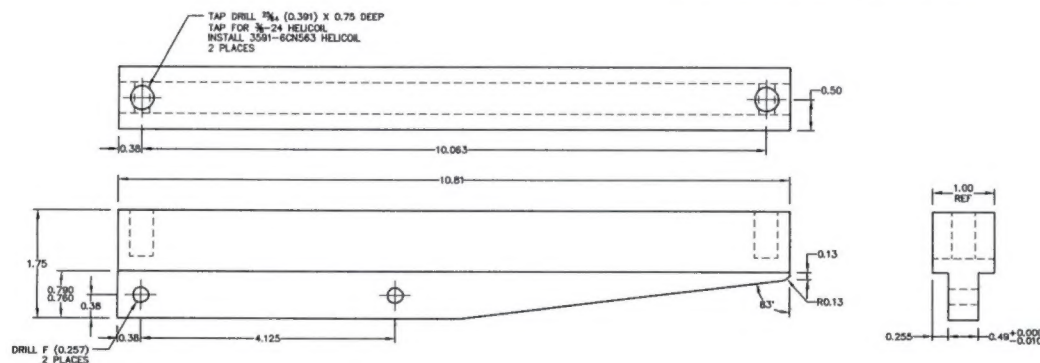
REV	DESCRIPTION OF CHANGE	INITIALS	DATE
0	INITIAL ISSUE		

36



01 BEAM

PART TO BE CNC MACHINED USING THIS DRAWING AS A TEMPLATE



02 ATTACHMENT BRACKET

14

NOTES

1. REMOVE ALL BURRS AND BREAK SHARP EDGES.
2. FINISH 100230-02 ATTACHMENT BRACKET: THOROUGHLY DEGREASE, ALODINE, EPOXY PRIME AND POLYURETHANE PAINT.

2	3591-60N563	SELF-LOCKING HELICOIL	6061-T6 ALUMINUM	QQ-A-200/B	4 X 1 FLAT BAR		
100230-02	02	ATTACHMENT BRACKET	6061-T6 ALUMINUM	QQ-A-200/B	8 X 1 FLAT BAR		
100230-01	01	BEAM	6061-T6 ALUMINUM	QQ-A-200/B	8 X 1 FLAT BAR		
02	01	PART NO.	ITEM	DESCRIPTION	MATERIAL	MATERIAL SPEC	STOCK SIZE
QTY	QTY	LIST OF MATERIALS					
		APPROVALS		DATE		AERO DESIGN LTD.	
		DRAWN: JEFF CLARKE		13 JUNE 2016		8088A MALASPINA ROAD	
		CHECKED: JASON REKVE		13 JUNE 2016		POWELL RIVER, BC, CANADA, V9A 0G5	
						TEL: 604.463.8078	
						www.aerodesign.ca	
		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES.		AIRBUS HELICOPTERS AS350/AS355, EC130			
		TOLERANCES ON:		BICYCLE RACK INSTALLATION			
		DECIMALS		BEAM FABRICATION			
		ANGLES		SCALE 1 : 1			
		X.XXX ±0.010		DWG. SIZE			
		X.XX ±0.03		DWG. NO.			
		X.X ±0.1		REV.			
		±1/2"		SHEET 1 OF 1			
				A1 100230 0			